AMENDMENTS TO THE DRAWINGS

The attached sheet, which includes Figure 2, replaces the original sheet of Figure 2.

Attachment: Replacement Sheet of Figure 2

REMARKS

Claims 1-5 are pending in the current application. Claims 1, 3 and 5 are independent claims.

Drawing Replacement

With this Amendment, Applicant has submitted a replacement of Figure 2.

Allowable Subject Matter

Initially, Applicant appreciates the Examiner's indication that claims 2 and 4 would be allowable if rewritten into independent form. In view of the remarks below and the present amendments, Applicant respectfully submits that all claims are allowable in their present form.

Claim Objections

Claims 1, 3, 4 and 5 stand objected to because of minor informalities. By this Amendment, all informalities have been corrected.

35 U.S.C. § 112, First Paragraph

Claim 5 stands rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Applicant respectfully traverses this enablement rejection.

The Examiner alleges that the claim language "converting the received data symbol samples into quasi pilot symbol samples based on the estimated polarities" is not fully enabled by the Specification. Applicant submits that the claim language in question is adequately supported by the Specification, as explained below.

There are typically many more data symbols available to a receiver than pilot symbols (see page 4, lines 19-21 of the Specification). Conventional methods of generating an SINR

estimate lack the ability to effectively use these data samples in the generation of the SINR estimate because the data symbols vary in polarity unpredictably (e.g., "1", "-1", etc.) (see page 4, line 21- page 5, line 2 of the Specification). The Specification teaches an example SINR estimation method of overcoming this dependency on data symbol polarity by converting data symbols into quasi pilot symbols which may be either independent or essentially independent of the data symbol polarities (see page 5, lines 4-7 of the Specification). An estimator 6 estimates the polarity for a data symbol (see page 5, lines 8-14 of the Specification). By assuming that this estimate is correct, the estimate may allow all data symbols to be treated as if they had the same polarity based on the output of the multiplier 8 which is received by the SINR estimator 12 (page 5, line 15-page 6, line 13). The example given in the Specification appreciates that this method generates more accurate SINR estimates as the estimator 6 more accurately estimates the polarity (see page 6, line 25 – page 7, line 2 of the Specification). Thus, since the data symbol polarities (e.g., which may be "1" or "-1") are adjusted based on the estimation of the estimator 6 so as to be treated as having a polarity of 1 (e.g., as would be the case with pilot symbols), these converted data symbols may be referred to as "quasi pilot symbols" as recited independent claim 5.

In view of the above remarks, Applicant respectfully submits that independent claim 5 is adequately enabled by the Specification.

Applicant respectfully requests that the Examiner withdraw this rejection.

35 U.S.C. § 102(b) Fukuhara

Claims 1 and 3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Fukuhara. Applicant respectfully traverses this art grounds of rejection.

Applicant respectfully submits that Fukahara cannot disclose or suggest generating either an SNR estimate or an SINR estimate which is "not dependent only on the polarities of

the plurality of received data symbol samples" as recited in independent claim 1 and similarly recited in independent claim 3.

Fukuhara discloses a signal to noise ratio determining method and apparatus for a receiver. Figure 4 illustrates a block diagram of the preferred embodiment of Fukuhara. In Figure 4, a signal is received via an antenna 1 and tuner 2 and is supplied as a sample at hold unit 3 (see col. 3, lines 12-15). A binary unit 4 processes the received sample value and determines whether the sample value correlates to a binary "1" or "0" (see col. 3, lines 23-29). The counters 5 and 6 are polarity dependent counters, with counter 5 incrementing a first counter when the received sample is binary "1" and counter 6 incrementing a second counter when the received sample is binary "0" (see col. 3, lines 30-35). The difference between the values held in the counters 5 and 6 is determined by a subtraction unit 9 (see col. 3, lines 39-40). The difference in the counter values are then used in the SNR calculation unit 10 to determine the SNR (see col. 3, lines 41-51).

The above described operations of the preferred embodiment of Fukuhara are entirely dependent on the polarity of the received data symbols because counters which are triggered by the respective polarities of the data symbols are used to determine the SNR. In view of the above remarks, Applicant respectfully submits that Fukahara cannot disclose or suggest generating either an SNR estimate or an SINR estimate which is "not dependent only on the polarities of the plurality of received data symbol samples" as recited in independent claim 1 and similarly recited in independent claim 3.

Applicant respectfully requests that the Examiner withdraw this art grounds of rejection.

Reconsideration and issuance of the present application is respectfully requested.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of claims 1-5 in connection with the present application is earnestly solicited.
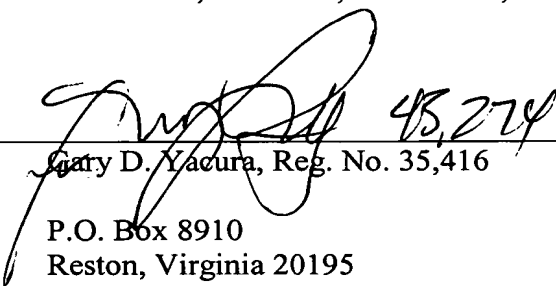
Should there be any outstanding matters that need to be resolved in the present application; the Examiner is respectfully requested to contact the undersigned at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By _____

Gary D. Yacura, Reg. No. 35,416

GDY/MJL/DAP/cdw

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

Attachment: Replacement Drawing of Figure 2 (one (1) Sheet)